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# CONTRIBUTIONS TOWARD A BRYOFLORA OF NEVADA: BRYOPHYTES NEW FOR THE SILVER STATE. PART III

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### ABSTRACT

Forty-two mosses and three liverworts are reported as new for Nevada. The genera Amblyodon, Campyliadelphus, Isopterygiopsis, Mesoptychia, Myurella, Plagiobryoides, Plagiobryum, Platydictya, Pseudocampylium, and Preissia are new for the state of Nevada. Splachnobryum obtusum and Pseudoleskeella rupestris are now confirmed for Nevada based on recently collected material. Grimmia texicana is excluded from the Nevada checklist based on a herbarium label locality error. The bryoflora of Nevada with 355 taxa is comprised of two hornworts, 49 liverworts, and 304 mosses.

Key Words: bryophyte inventory.

The most recent published checklist of Nevada bryophytes listed 310 taxa (Brinda et al. 2007). Other species new to science occurring in Nevada have subsequently been published (Greven 2010; Medina et al. 2011; Spence and Shevock 2012). In the third installment of this series we add 45 taxa as new for Nevada based on voucher specimens. Each taxon has a short entry for specimen location, herbaria citation, and notes on habitat and substrate. Field collecting and inventory efforts continue to document new taxa for the Nevada bryoflora (Shevock et al. 2005; Spence et al. 2006). Many of the species reported herein have been reviewed, examined, or determined by persons involved in the bryophyte volumes of the Flora of North America Project (FNA 2007, 2014).

### LIVERWORTS

**Lophozia heterocolpos** (Thedenius) M. Howe [Scapaniaceae]

Elko Co.: Humboldt National Forest. East Humboldt Wilderness, base of cirque, headwaters of Fourth Boulder Creek, 16 Aug 2007, 9475 ft, *Shevock 30298* (CAS) [determined by Bill Doyle]. On seepy metamorphic rock walls and ledges in a subalpine conifer forest.

Mesoptychia badensis (Gottsche) L. Söderström & Váňa [Jungermanniaceae]

Clark Co.: Toiyable National Forest, Mt. Charleston Wilderness, South Loop Trail, 28 Sep 2008, 10,040 ft, *Brinda 2361b* (MO, SIU) [confirmed by Vadim Bakalin].

Preissia quadrata (Scopoli) Nees [Marchantiaceae] Clark Co.: Toiyabe National Forest, Mt. Charleston Wilderness, South Loop Trail, 28 Sep 2008, 10,040 ft, *Brinda 2359* (UNLV) and *Brinda 2361a* (CAS, MO, UNLV).

## Mosses

Aloina ambigua (Bruch & W.P. Schimper) Limpricht [Pottiaceae]

Clark Co.: Valley of Fire State Park, Mouse's Tank Trail, 4 Mar 2006, 2030 ft, *Brinda 724* (MEXU, UNLV) and *Brinda 726* (CAS, MEXU, UNLV) [confirmed by Claudio Delgadillo].

Amblyodon dealbatus (Swartz ex Hedwig) Bruch & W.P. Schimper [Meesiaceae]

Elko Co.: Humboldt National Forest, East Humboldt Wilderness, canyon wall above beaver ponds near East Humboldt Highland Trail, Third Boulder Creek Basin, 15 Aug 2007, 9275 ft, Shevock 30394 (CAS, NY, UNLV) [determined by Bill Buck]. On moist rock soil and litter over rock terraces and cliff face with Primula Linnaeus, Saxifraga Linnaeus, and Veratrum Linnaeus within a subalpine forest of Pinus flexilis E. James.

Anoectangium handelii Schiffner [Pottiaceae]

Clark Co.: Spring Mountains: cliff above Pine Creek, 4 Apr 2005, 4500 ft, Brinda and Shevock 112 (CAS, UNLV); hill east of Blue Diamond, 26 Feb 2006, 3350 ft, Brinda 695a (UNLV); White Rock Spring, 26 Feb 2006, 4825 ft, Brinda 703 (UNLV); Gateway Canyon, 26 Feb 2006, 3865 ft, Brinda 721 (UNLV); south fork of Pine Creek, 27 Apr 2006, 4265 ft, Brinda 1012 (UNLV); Virgin Mountains, Sandstone Bluffs above the Corral North of Quail Point, 28 Jan 2006, 4265 ft, *Brinda 587* (MO, UNLV) [confirmed by Richard Zander]; Valley of Fire, Mouse's Tank, 4 Mar 2006, 2040 ft, Brinda 727b (UNLV); Valley of Fire, Mouse's Tank Trail, 10 Mar 2007, 1965 ft, Brinda 1284 (UNLV); Frenchman Mountain, Great Unconformity, 5 Mar 2006, 2170 ft, Brinda 782 (UNLV); Muddy Mountains, Bowl of Fire, 17 Feb 2007, 2095 ft, Brinda 1265 (CAS); Muddy Mountains, Bowl of Fire, 17 Feb 2007, 2095 ft, Brinda 1269 (UNLV).

Brachythecium turgidum (C.J. Hartman) Kind-

berg [Brachytheciaceae]

Elko Co.: East Humboldt Wilderness, Humboldt National Forest, slopes south of Third Boulder Creek toward Birdeye Lake, 11 Aug 2007, 9250 ft, Shevock 30324 (CAS, UNLV). This rather glossy appearing species displays a distribution pattern of widely disjunct occurrences across the Intermountain West. The Nevada occurrence is from vertical rock walls with dripping water in a subalpine forest.

Bryum calobryoides J.R. Spence [Bryaceae]

Clark Co.: Spring Mountains, Rainbow Mountain Wilderness, south fork of Pine Creek, 29 Apr 2008, 4690 ft, *Brinda 2263* (CAS, UNLV); Spring Mountains, Rainbow Mountain Wilderness, south fork of Pine Creek, 29 Apr 2008, 4690 ft, *Brinda 2279* (MO, NY). Elko Co.: along Jarbidge River at Lower Bluster Campground, Humboldt National Forest, 25 Aug 2002, 6600 ft, *Shevock and Glazer 22740a* (CAS). Small plants can occur among other mosses so it can be easily overlooked. The orbicular-shaped leaves are, nonetheless, highly diagnostic.

Campyliadelphus chrysophyllus (Bridel) Chopra

[Amblystegiaceae]

Lander Co.: Toiyabe Range, Toiyabe National Forest, headwaters of Big Creek, 30 May 2002, 8100 ft, *Shevock and Glazer 22352* (CAS, UNLV) [determined by David Toren].

Dichodontium olympicum Renauld & Cardot

[Dicranaceae]

Elko Co.: East Humboldt Wilderness, Humboldt National Forest, slopes south of Third Boulder Creek toward Birdeye Lake, 14 Aug 2007, 9200 ft, Shevock 30342 (CAS, UNLV); East Humboldt

Wilderness, Humboldt National Forest, slopes south of Third Boulder Creek toward Birdeye Lake, 14 Aug 2007, 9200 ft, *Shevock 30303* (C AS); Humboldt National Forest, Ruby Mountains, Lamoille Canyon along Ruby Crest Trail to Dollar Lakes, 20 Jul 2002, 8975 ft, *Shevock and Glazer 22483a* (CAS) [determined by David Toren]. Open subalpine metamorphic or granitic soils over rock terraces.

Didymodon eckeliae Zander [Pottiaceae]

Carson City.: Clear Creek Range just south of highway 50 and 2.3 miles west of highway 395, 5 Apr 2002, 5200 ft, Shevock 21965 (CAS). Douglas Co.: Red Canyon, northern edge of Burbank Canyon Scenic Area, eastern slopes of Pine Mountain, 7 Apr 2002, 6000 ft, Shevock et al. 22020 (CAS). Lander Co.: Toiyabe National Forest, Kingston Canyon Road near the old Kingston Guard Station, 5 Sep 2011, 7530 ft, Brinda and Hanner 3154 (CAS, MO). Granitic and marble rocks within pinyon pine woodlands and Jeffrey pine forests.

Drepanocladus polygamus (Bruch & W.P. Schim-

per) Hedenäs [Amblystegiaceae]

Carson City.: Sierra Nevada, Lake Tahoe Basin, highway 28 at Bliss Creek between Skunk Harbor and Secret Harbor, Shevock 22429 (CAS, UNLV). Lander Co.: Kingston Creek, Toiyabe Range, Toiyabe National Forest, 30 May 2002, 7400 ft, Shevock and Glazer 22338 (CAS, UNLV) [determined by David Toren]. In wet meadow and fen habitats.

Encalypta alpina Smith [Encalyptaceae]

Elko Co.: East Humboldt Wilderness, East Humboldt Mts, Humboldt National Forest, wall of cirque just above headwaters of Fourth Boulder Creek, 16 Aug 2007, 9575 ft, Shevock 30434 (CAS, UNLV) [determined by David Toren; confirmed by Diana Horton]. On moist rock ledges and terraces mixed among Blepharostoma trichophyllum (Linnaeus) Dumortier, Distichium capillaceum (Hedwig) Bruch & Schimper, and Platydictya jungermannioides (Bridel) H.A. Crum, in a subalpine conifer forest. A highly unexpected addition to the bryoflora of Nevada considering the distribution pattern of widely disjunct occurrences coupled with specific microhabitat requirements.

Entosthodon bolanderi Lesquereux [Funariaceae] Clark Co.: Spring Mountains, Red Rock Canyon National Conservation Area. South Fork Pine Creek just above mouth of canyon, 4 Apr 2005, 4200 ft, Shevock and Brinda 26535 (CAS) [determined by David Toren].

Entosthodon tucsoni (E.B. Bartram) Grout [Funariaceae]

Clark Co.: Spring Mountains, Red Rock Canyon National Conservation Area, South Fork Pine Creek, 4 Apr 2005, 4200 ft, *Brinda and Shevock* 100 (CAS, UNLV); Spring Mountains, Red Rock Canyon National Conservation Area, South Fork Pine Creek, 27 Apr 2006, 4200 ft, *Brinda and Shevock 999* (UNLV); Spring Mountains, Red Rock Canyon National Conservation Area, South Fork Pine Creek, 27 Apr 2006, 4200 ft, *Shevock and Brinda 26535a* (CAS) [determined by David Toren].

Fabronia ciliaris (Bridel) Bridel [Fabroniaceae] Clark Co.: South Virgin Mountains, Gold Butte, 21 Apr 2007, 3970 ft, *Brinda 1477* (CAS, UNLV).

Fissidens bryoides Hedwig [Fissidentaceae]
White Pine Co.: Egan Range, Sawmill Creek
Canyon 5.4 mi west of Cave Valley, 31 Jul
1979, 8000 ft, Lavin, Mozingo and Ryser M-220
(NY) [confirmed by Ronald Pursell].

Gemmabryum demaretianum (Arts) J.R. Spence [Bryaceae]

Clark Co.: McCullough Mountains, pass on highway 164, 16 Oct 2005, 4815 ft, *Brinda 394, 397* (UNLV); El Dorado Mountains, near highway 165, 23 Feb 2006, 3300 ft, *Brinda 647* (UNLV). Esmeralda Co.: White Mountains, road to Middle Canyon, 3 Jul 2005, 7035 ft, *Brinda 225* (UNLV).

Gemmabryum klinggraeffii (W.P. Schimper) J.R. Spence & H.P. Ramsay [Bryaceae]

Clark Co.: University of Nevada, Las Vegas, Main Campus, lawn Between Physics and Health Sciences Buildings, 27 Jan 2011, 2030 ft, *Brinda and Greenwood 2615* (UNLV).

Gemmabryum violaceum (Crundwell & Nyholm)
I R Spence [Bryaceae]

J.R. Spence [Bryaceae]

Churchill Co.: Stillwater Range between Shamrock Canyon and Fondaway Canyon, 3 May 2006, 1500 m, Tonenna 38 (CAS); Stillwater Range between Shamrock Canyon and Fondaway Canyon, 3 May 2006, 1500 m, Tonenna 43 (CAS). Clark Co.: Spring Mountains, Bonanza Peak Trail, 4 Jul 2005, 8140 ft, Brinda 296 (UNLV); Virgin Mountains, Cabin Creek, 21 Apr 2006, 4560 ft, Brinda 916a (UNLV). Lincoln Co.: Hiko Range, highway 93 about 3 miles E of highway 375, 3 Apr 2005, 4050 ft, Brinda and Shevock 12a (UNLV); Hiko Range, highway 93 about 3 miles E of highway 375, 3 Apr 2005, 4050 ft, Brinda and Shevock 15b (UNLV). Nye Co.: Death Valley National Park, Grapevine Mountains, Amargosa Range above Strozzi Ranch site south of Wahguyhe Peak, 11 Jan 2002, 6800 ft, Shevock and York 21687 (CAS, UNLV).

Grimmia vaginulata K. Kellman [Grimmiaceae] Clark Co.: Frenchman Mountain, below north summit, 30 Jan 2007, 3745 ft, *Brinda 1251* (UNLV); Lake Mead NRA, Northshore Drive

south of the Muddy Mountains, 11 Mar 2007, 1615 ft, Brinda and Rosentreter 1301 (UNLV) [confirmed by Ken Kellman]; South Virgin Mountains, along Gold Butte Road east of Tramp Ridge, 21 Apr 2007, 2935 ft, Brinda and Shevock 1490 (UNLV) [confirmed by Ken Kellman]; Virgin Mountains, Whitney Pockets, 21 Apr 2007, 3060 ft, Brinda and Shevock 1510b (UNLV); Lake Mead NRA, sandstone outcrops along the south side of Northshore Road, about 1 km east of West End Wash, 31 Mar 2013, 1730 ft, Brinda and Stark 4448 (CAS, MO, NY, UNLV). This recently described species (Kellman 2011) was known only from the type locality in coastal central California. The occurrences for Nevada are therefore a remarkable extension in both distribution and habitat for this species. Grimmia vaginulata is not uncommon on the red sandstone outcrops of southern Nevada.

Gymnostomum calcareum Nees & Hornschuch [Pottiaceae]

Clark Co.: BLM Red Rock Canyon National Recreation Area. North Fork Pine Creek, 4 Apr 2005, 4300 ft, *Shevock, Brinda, and Stark 26507* (CAS, UNLV) [determined by David Toren]; BLM Red Rock Canyon National Recreation Area. North Fork Pine Creek, 4 Apr 2005, 4300 ft, *Brinda, Shevock, and Stark 78* (UNLV). Elko Co.: Ruby Mountains, Humboldt National Forest, between Liberty Lake and Liberty Pass, 31 Jul 2004, 10,325 ft, *Shevock 26039a* (CAS) [determined by David Toren].

Gymnostomum viridulum Bridel [Pottiaceae]

Clark Co.: Spring Mountains, Gateway Canyon, 26 Feb 2006, 3865 ft, *Brinda 720* (CAS, MO, UNLV) [determined by Richard Zander]. This species resembles and occupies the same microhabitats as *G. calcareum* but the axillary gemmae in *G. viridulum* readily distinguish this species.

Homomallium mexicanum Cardot [Hypnaceae] Clark Co.: Red Rock Canyon National Recrea-

tion Area, Willow Spring Picnic Area, 2 Apr 2003, 4825 ft, Shevock and Stark 23970 (CAS, UNLV); Red Rock Canyon National Recreation Area, Willow Spring Picnic Area, 2 Apr 2003, 4825 ft, Shevock and Stark 23972 (CAS) [confirmed by David Toren]. On sandstone boulders. White Pine Co.: Snake Range, Great Basin National Park, Grey Cliffs off of Baker Creek Road toward Grey Cliffs Group campground, 27 Jul 2003, 7200 ft, Shevock, Glazer and Clifton 24343a (CAS). On limestone walls mixed with Hypnum vaucheri Lesquereux.

**Hygroamblystegium noterophilum** (Sullivant & Lesquereux *ex* Sullivant) Warnstorf [Amblystegiaceae]

Elko Co.: Ruby Valley, 20 May 1935, 6000 ft, W. W. Bennett s.n. (NY 714904) [confirmed by Ryszard Ochyra].

Hygrohypnum bestii (Renauld & Cardot) Broth-

erus [Amblystegiaceae]

Elko Co.: East Humboldt Wilderness, Humboldt National Forest, slopes between Boulder Lake and fens with beaver ponds above East Humboldt Highline Trail, 15 Aug 2007, 9490 ft, Shevock 30389 (CAS). Esmeralda Co.: White Mountains, Inyo National Forest, Morris Creek, 28 May 2002, 6800 ft, Shevock and Glazer 22292 (CAS). Washoe Co.: Lake Tahoe Basin, shaded streamlet above Incline Village, 29 Jul 2002, 7500 ft, Shevock 22607 (CAS) [determined by Dave Jamieson]. On rocks in splash zone of stream.

**Hygrohypnum styriacum** (Limpricht) Brotherus [Amblystegiaceae]

Elko Co.: East Humboldt Wilderness, Humboldt National Forest, base of cirque, headwaters of Fourth Boulder Creek off of East Humboldt Highline Trail, 16 Aug 2007, 9475 ft, Shevock 30418 (CAS, MO, NY, UNLV) [determined by David Toren]. On seepy metamorphic rock walls and ledges with Primula and Saxifraga within a subalpine Pinus flexilis forest.

Imbribryum mildeanum (Juratzka) J.R. Spence [Bryaceae]

Humboldt Co.: Santa Rosa Range, Humboldt National Forest, Lye Creek about 2 mi west of Martin Creek Ranger Station, 23 June 2004, 7915 ft, Nachlinger and Tiehm 2640 (CAS, MO, NY, UNLV, WTU). Lander Co.: Sheep Creek Range, Plateau north of Battle Creek, 12 June 2002, 6595 ft, Nachlinger and Tiehm 2446 (CAS, MO, NY, UBC, UNLV, WTU). White Pine Co.: Antelope Range, Lookout Spring, 10 June 2002, 6680 ft, Nachlinger and Tiehm 2441 (CAS, MO, NY, UBC, UNLV, WTU).

Isopterygiopsis pulchella (Hedwig) Z. Iwatsuki

[Hypnaceae]

Elko Co.: Jarbidge Mountains, Humboldt National Forest, road paralleling Jarbidge River above Pine Creek Campground just above junction with Fox Creek, 25 Aug 2002, 6700 ft, Shevock and Glazer 22762 (CAS) [determined by David Toren].

Jaffueliobryum raui (Austin) Thériot [Grimmiaceae]

Clark Co.: Virgin Mountains, near Red Bluff Spring, 19 Feb 2006, 2100 ft, *Brinda 645b* (UNLV); Gold Butte Backcountry Byway Road at Whiskey Pocket west of Whiskey Pass, 21 Apr 2007, 3025 ft, *Shevock and Brinda 29783* (CAS, UNLV) [determined by David Toren].

Myurella tenerrima (Bridel) Lindberg [Pterigy-nandraceae]

Elko Co.: East Humboldt Mountains, East Humboldt Wilderness, Humboldt National Forest, along East Humboldt Highline Trail just below saddle, Fourth Boulder Creek Basin, 16 Aug 2007, 9635 ft, Shevock 30406 (CAS, UNLV) [determined by David Toren]. Crevice of metamorphic rock outcrops in a subalpine forest of Pinus flexilis.

Orthotrichum pilosissimum Medina, Lara &

Garilleti [Orthotrichaceae]

Esmeralda Co.: Grapevine Mountains, Amargosa Range, Death Valley National Park, just south of Strozzi Ranch site and Brier Spring, 14 Dec 2001, 6400 ft, Shevock, Davis and Davis 21581a (CAS); White Mountains, Inyo National Forest. Morris Creek, north base of Boundary Peak, 31 May 2002, 6800 ft, Shevock 22294 (CAS). Eureka Co.: Toiyabe National Forest along road 004, 9.4 mi east of Monitor Valley, May 2002, 7500 ft, Shevock and Glazer 22368 (CAS). Humboldt Co.: Santa Rosa Mountains, Humboldt National Forest, Buffalo Creek, 29 Oct 2008, 5200 ft, Garilleti et al. s.n. (CAS, NY, VAL). Mineral Co.: Anchorite Hills, Toiyabe National Forest, Box Canyon, 28 Oct 2008, 7000 ft, Lara et al. s.n. (CAS, UC). Nye Co.: Alta Toquima Wilderness, Toiyabe National Forest, Pine Creek above Pine Creek Campground, May 2002, 7700 ft, Shevock and Glazer 22397 (CAS). This species was recently described for Nevada (Medina et al. 2011). We have added it here in an effort to track all taxa new for Nevada since the published checklist (Brinda et al. 2007).

Philonotis caespitosa Juratzka [Bartramiaceae]

Elko Co.: East Humboldt Mountains, East Humboldt Wilderness, Humboldt National Forest, cirque below Greys Peak west of Angel Lake, 21 Jul 2002, 8800 ft, Shevock and Glazer 22582 (CAS, UC, UNLV) [determined by Dan Norris; confirmed by David Toren]. On moist to wet soil, high elevations.

Plagiobryoides vinosula (Cardot) J.R. Spence

[Bryaceae]

Churchill Co.: Stillwater Range between Shamrock Canyon and Fondaway Canyon, 3 May 2006, 1500–1700 m, *Tonenna 28* (CAS); Stillwater Range between Shamrock Canyon and Fondaway Canyon, 3 May 2006, 1500–1700 m, *Tonenna 37* (CAS). Lander Co.: Toiyabe Range, Toiyabe National Forest, along forest road 002, 3.5 miles above Kingston Guard Station, 30 May 2002, 30 May 2002, *Shevock and Glazer 22345* (CAS). This species has also recently been documented for Death Valley National Park at Grapevine Springs in adjacent California and therefore likely to be

discovered in adjacent Esmeralda and Clark counties. Plants occur in wet riparian areas or seeps with high salt concentrations generally associated with either *Didymodon tophaceus* (Bridel) Lisa or *Eucladium verticillatum* (Hedwig) Bruch & Schimper.

Plagiobryum zierii (Dickson ex Hedwig) Lindberg [Bryaceae]

Elko Co.: East Humboldt Mountains, Humboldt National Forest, cirque above falls west of Angel Lake, 3 Aug 2004, 8500 ft, Robertson 8669 (CAS, UC); East Humboldt Wilderness, East Humboldt Mts., base of cirque, headwaters of Fourth Boulder Creek, 16 Aug 2007, 9475 ft, Shevock 30426 (CAS, NY, UC, UNLV) [confirmed by Spence]. Wet soil over metamorphic walls and ledges with Salix, Primula, and Saxifraga in a subalpine Pinus flexilis forest.

Platydictya jungermannioides (Bridel) H. Crum

[Hypnaceae]

Clark Co.: Toiyabe National Forest, Spring Mountains National Recreation Area, Mary Jane Falls, 3 Oct 2004, 9045 ft, Brinda 410 (UNLV); Toiyabe National Forest, Mt. Charleston Wilderness, wash below Big Falls, 3 Oct 2004, 9055 ft, Brinda 414 (CAS). Elko Co.: East Humboldt Mountains, East Humboldt Wilderness, Humboldt National Forest, avalanche chute with steep rocky canyon, Third Boulder Creek Basin, 15 Aug 2007, 9275 ft, Shevock 30396 (CAS, MO, NY, UNLV); wall of cirque just above headwaters of Fourth Boulder Creek, 16 Aug 2007, 9575 ft, Shevock 30434b (CAS). Mixed with Encalypta alpina, Blepharostoma trichophyllum, and Distichium capillaceum. White Pine Co.: Snake Range, Great Basin National Park, Snake Creek near Shoshone Campground, 26 Jul 2003, 8200 ft, Shevock, Glazer and Clifton 24294a (CAS); on soil bank of creek mixed with Mnium marginatum (Dickson ex Withering) Palisot de Beauvois; upper slopes of Blue Canyon, 27 Jul 2003, 9300 ft, Shevock, Glazer and Clifton 24318a (CAS); on soil bank of creek mixed with Mnium marginatum; upper slopes of Blue Canyon, 27 Jul 2003, 9300 ft, Shevock, Glazer and Clifton 24325 (CAS, MO, NY, UNLV) [confirmed by David Toren]. This is a very small moss that can easily be overlooked. It frequently occurs in mixed populations among other larger mosses and liverworts. Microhabitat is damp soil and rock recesses primarily in shaded places.

**Pseudocampylium radicale** (P. Beauvois) Vanderpoorten & Hedenäs [Amblystegiaceae]

Elko Co.: Jarbidge Mountains, Humboldt National Forest, along forest road 748 at Seventysix Creek, Major Gulch, 24 Aug 2002,

6250 ft, Shevock and Glazer 22678 (CAS, UNLV); Freighters Defeat along road 752 north of town of Jarbidge, 26 Aug 2002, 5650 ft, Shevock and Glazer 22803 (CAS, NY, UNLV). Humboldt Co.: Pine Forest Range, BLM Winnemucca Dist., upper slopes of Wood Canyon, 5 Aug 2005, 7150 ft, Shevock and Nachlinger 27501 (CAS, UNLV) [determinations by David Toren]. Along stream courses. This plant can readily be separated from Amblystegium serpens by the presence of paraphyllia on the stems. An earlier name for this species is Amblystegium radicale.

Pseudoleskeella rupestris (Berggren) Hedenäs & Söderström [Leskeaceae]

Clark Co.: Red Rock Canyon National Recreation Area, North Fork Pine Creek, 4 Apr 2005, 4500 ft, *Shevock, Brinda and Stark 26526* (CAS). In the Nevada checklist (Brinda et al. 2007) this species was reported from Nevada but we had not previously seen a specimen to validate its occurrence in the state.

Ptychostomum pacificum J.R. Spence & Shevock [Bryaceae]

Washoe Co.: Sierra Nevada, Tahoe Meadows, Toiyabe National Forest, 13 Sep 2009, 8740 ft, Wishner 9512 (CAS, UC). This species was recently described as new to science (Spence and Shevock 2012). We have included it here in an effort to track all taxa new for Nevada since the published checklist (Brinda et al. 2007). This species is likely to remain a very rare species in Nevada although it is widespread in fens in the Californian portion of the Sierra Nevada.

**Splachnobryum obtusum** (Bridel) C. Müller Hal. [Splachnobryaceae]

Clark Co.: Lake Mead National Recreation Area, Gold Strike Canyon Hot Springs, 4 Apr 2010, 985 ft, *Brinda 2613* (CAS, MO, NY, UNLV) and *Webb s.n.* [Mar 2010] (UNLV); Virgin Basin, Lake Mead at water's edge, 5 miles north-northeast of Middle Point, 22 Apr 1941, *Clover 6269* (NY!). In Brinda et al. (2007) we had doubts about this taxon actually occurring in Nevada and it was assumed the record was likely to be a herbarium processing error. However, with this collection we confirm this taxon for the Nevada bryoflora.

Tortella alpicola Dixon [Pottiaceae]

Clark Co.: Spring Mountains, north-facing Ravine above South Fork of Pine Creek, 27 Apr 2006, 4250 ft, *Brinda 1018* (CAS, MO, UNLV); Sheep Range, near the end of (closed) Sawmill Road, 6 Aug 2006, 7578 ft, *Brinda 1213* (MO, UNLV). Lincoln Co.: Mormon Mountains, Upper South Fork Toquop Wash, 14 May 2005, 6860 ft, *Brinda 132* (CAS, MO, UNLV) [confirmed by Patricia Eckel].

Warnstorfia fluitans (Hedwig) Loeske [Calliergonaceael

Washoe Co.: Sierra Nevada, Carson Range, Big Meadows South of Verdi, north end of Meadows, 25 Sep 1998, 8715 ft, *Tiehm 12764* (NY) [determined by David Toren].

Warnstorfia pseudostraminea (C. Müller Hal.) Tuomikoski & T. Koponen [Calliergonaceae]

White Pine Co.: Snake Range, Great Basin National Park, Alpine Lakes Trail from Wheeler Peak trailhead to Stella Lake, 27 Aug 2005, 10,070 ft, *Shevock and Glazer 27619* (CAS, UNLV) [determined by David Toren].

Weissia ligulifolia (E.B. Bartram) Grout [Pottiaceae]

Clark Co.: Bureau of Land Management, Las Vegas Dist., Virgin Mountains, White Rock site at mouth of Cabin Canyon, 15 Nov 2002, 3950 ft, Shevock et al. 23632 (CAS, MO, UNLV) [determined by Richard Zander]; 'Nay' Canyon, 28 Feb 2006, 4720 ft, Brinda 583 (UNLV); near Red Bluff Spring, 19 Feb 2006, 2035 ft, Brinda 618 (UNLV); El Dorado Mountains, near highway 165, 23 Feb 2006, 3300 ft, Brinda 649 (UNLV); Spring Mountains, Gateway Canyon, 26 Feb 2006, 3865 ft, Brinda 715 (UNLV); Valley of Fire State Park, Mouse's Tank Area, 4 Mar 2006, 2095 ft, Brinda 743B (UNLV). Lincoln Co.: Hiko Range, highway 9 about 3 mi east of junction with highways 375 and 318, 3 Apr 2005, 4050 ft, Brinda and Shevock 3 (UNLV); Hiko Range, highway 9 about 3 mi east of junction with highways 375 and 318, 3 Apr 2005, 4050 ft, Brinda and Shevock 7 (UNLV); Hiko Range, highway 9 about 3 mi east of junction with highways 375 and 318, 3 Apr 2005, 4050 ft, Shevock and Brinda 26468 (CAS, UNLV); Hiko Range, highway 9 about 3 mi east of junction with highways 375 and 318, 3 Apr 2005, 4050 ft, Shevock and Brinda 26476 (CAS); South Pahroc Range, Pahroc Summit, 3 Apr 2005, 5000 ft, Shevock and Brinda 26498 (CAS, NY, UNLV) [determined by David Torenl.

#### **EXCLUDED SPECIES**

Grimmia texicana Greven [Grimmiaceae]

Clark Co.: 2 mi W of Las Vegas. This record is based on a single herbarium specimen at FH, examined and subsequently cited as this species in Greven (2010). The collector's name and date of collection were omitted in the 2010

publication. According to Greven (2010), this species is related to *Grimmia arizonae*. We have determined that the collection cited by Greven (2010, and personal communication) actually was collected near Las Vegas, New Mexico rather than Las Vegas, Nevada. Therefore, the literature reference of *Grimmia texicana* occurring in Nevada is erroneous and this species is hereby excluded from the Nevada bryoflora.

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#### LITERATURE CITED

Brinda, J. C., L. R. Stark, J. R. Shevock, and J. R. Spence. 2007. An annotated checklist of the bryophytes of Nevada, with notes on collecting history in the state. The Bryologist 110:673–705.

FLORA OF NORTH AMERICA EDITORIAL COMMITTEE (eds.). 2007. Flora of North America. North of Mexico, Vol. 27. Mosses Part 1. Oxford University

Press, New York and Oxford.

FLORA OF NORTH AMERICA EDITORIAL COMMITTEE (eds.). 2014. Flora of North America. North of Mexico, Vol. 28. Mosses Part 2. Oxford University Press, New York and Oxford.

GREVEN, H. 2010. *Grimmia texicana* sp. nov. (Grimmiaceae) from Texas and its separation from *Grimmia arizonae*. The Bryologist 113:360–364.

Kellman, K. 2011. *Grimmia vaginulata* (Bryopsida, Grimmiaceae) a new species for the central coast of California. Madroño 58:190–198.

MEDINA, R., F. LARA, V. MAZIMPAKA, J. R. SHE-VOCK, AND R. GARILLETI. 2011. *Orthotrichum pilosissimum* (Orthotrichaceae), a new moss from arid areas of Nevada with unique axillary hairs. The Bryologist 114:316–324.

SHEVOCK, J. R., J. R. SPENCE, AND L. R. STARK. 2005. Contributions toward a bryoflora of Nevada: bryophytes new for the Silver State. Part I.

Madroño 52:66-71.

Spence, J. R., L. R. Stark, and J. R. Shevock. 2006. Contributions toward a bryoflora of Nevada: bryophytes new for the Silver State. Part II. Madroño 53:400–403.

—— AND J. R. SHEVOCK. 2012. Ptychostomum pacificum (Bryaceae) a new fen species from California, Oregon, and western Nevada, USA. Madroño 59:156–162.